

# ALS General User Proposal (Includes Experiment Safety Sheet)

## Overview and Contact Information

[Click here to preview a pdf version of this entire form.](#)

To properly navigate this form use the buttons at the bottom of this page. Before you go on to the next page you must enter mandatory fields which are denoted by a red asterisk(\*) However at any time you may also save this form to complete it at a later date.

### Overview

For beamtime cycle **2017-1 Jan - Jun** Submit this proposal by **September 7, 2016**

**Title of Experiment\*** (100 characters max including spaces)

**Abstract: Describe the proposed research project\*** (600 characters max including spaces)

**Discipline\***

### Type of Research

Are you employed by an industrial company? ☐ (Click for yes)

Please check if your research is wholly or partially funded by Industry ☐ (Click for yes)

If either above briefly describe the benefits to industry and the expected outcomes in terms of products. (400 characters max including spaces)

**Does this experiment require any proprietary time?** (Proprietary work is where there is no intention to publish or make the results available, eg commercial work) ☐ (Click for yes)

**Is this proposal associated with the LBNL LDRD Program?** ☐ (Click for yes)

**Are you submitting this proposal to the ALS because of the transition between NSLS-I and NSLS-II?** ☐ (Click for yes)

**Are you applying for:**

- ☐ Structural Biology beamline (Protein Crystallography and Protein SAXs only)
- ☐ Any other beamline

### Export Control

**Does your group intend to engage in export-controlled work at the ALS?** This might include bringing any export-controlled equipment or technical data into the facility to perform the work. (In this context, "[export controlled](#)" refers to U.S. Government regulations restricting foreign national access to instruments, materials, software, or technology which may be controlled for national security, economic and/or foreign policy reasons. "Foreign nationals" are individuals who are not US citizens or permanent residents.) ☐ (Click for yes)

### Proposal Review

Keywords will be used for assignment of proposal reviewers. Select the most appropriate keywords to describe this proposal. If none of the keywords were useful please enter an Other Keyword.

**Scientific Keyword\***

**Other Scientific Keyword**

**Technical Keyword\***

**Other Technical Keyword**

Enter any proposal reviewers you wish to exclude from the review of this proposal

## Contact Information

Both the Experiment Leader and PI of group will be used as point of contact. The PI is the leader and the individual responsible for the group at the home institution, and the experiment leader is often the person completing the proposal form. In this way the ALS would like to encourage postdocs and students to gain experience in submitting proposals as the experiment leader, while benefiting from the experience and capability of the group within which they work.

### Experiment Leader/Person Completing Form

First name  Proposal

Middle initial

Last name  Coordinator

Suffix

Phone  (510)486-7692

Email address  alspe@lbl.gov

Institution  Lawrence Berkeley National Laboratory

Other Institution

ALS is now collecting ORCID identifiers for users. These will help us with a persistent digital identifier for every researcher. For more information on how to obtain an ORCID number go to <http://orcid.org>

ORCID

## Principal Investigator of your group

First name\*

Middle initial

Last name\*

Suffix

Phone\*

Email address\*

Institution\*

Enter Institution if not in list

Please note: If your institution is not in the pulldown list, then there is no current user agreement between your Institution and LBNL. Such an agreement must be signed before work can take place at the ALS. For more information please go to <http://www-als.lbl.gov/index.php/user-information/user-guide/59-establish-a-user-agreement.html>

Enter name and email or phone of contact for establishing a user agreement (typically someone in your contract office)

Name  Email  Phone

[Comments or suggestions about this page](#)

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# ALS General User Proposal (Includes Experiment Safety Sheet)

## Beamtime Request

**Indicate each beamline required to perform the work described in your proposal.**

For each beamline, add the total number of shifts (One shift = 8 hours beam time) required in the next cycle. Please note that a proposal may stay active for up to 4 cycles.

**2-Bunch** If the experiment requires 2-bunch beamtime please check the box.

**Roll-Up endstations** If the experiment requires the use of a Roll-Up endstation please check the box. (Most experiments use existing endstations and do not require a Roll-Up endstation)

[Click here for more information about Beamlines](#)

Beamline/Endstation	Shifts for Total Program	Shifts This Cycle	Roll-Up Endstation	2- Bunch	Wavelength/Energy range
1 <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
2 <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
3 <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>

**We no longer ask for an alternate beamline for each BL Choice. However if your proposal is below the cutoff on the requested beamline, and therefore not allocated time, will you allow the ALS to move the proposal to an alternate beamline?** ☐ **(Click for yes)**

[Comments or suggestions about this page](#)

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# ALS General User Proposal (Includes Experiment Safety Sheet)

## Detailed Description of Experimental Program

### Scientific Support Case

Please attach a pdf file with your scientific support case.\*

- Title
- Abstract
- Narrative description of the science to be pursued. Please be aware that reviewers may not be an expert in your field. Use the keywords you have chosen as guidelines to the breadth of reviewer expertise
- Justification for each beam line and the amount of beam time requested (may include preliminary data to demonstrate feasibility)
- Previous scientific accomplishments and synchrotron experience
- References

### Length

3 pages in length for **General Science** proposals. Only the first 3 pages will be read by the review panel.

no file selected

Current file attached:

### Request access to the Molecular Foundry (for nanoscience research)

Please note this request is intended to cover projects where the main focus of the work is at the ALS and limited access to the Molecular Foundry (MF) is needed. If your main focus is at MF or you require significant MF facility access we encourage you to submit a separate proposal at <http://foundry.lbl.gov/> Please note, access to MF is not guaranteed even if your proposal is successful at ALS. If access is agreed, it will be limited as described on our web site.

**Check box if you require access to facilities at the Molecular Foundry (MF) for this proposal.**

☐ **(Click for yes)**

We encourage you to read our web site on applying for access to MF as part of your ALS proposal.

[Click here for more information about the Molecular Foundry](#)

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# ALS General User Proposal (Includes Experiment Safety Sheet)

## Request Access to the Molecular Foundry

You are about to request technical support from the Molecular Foundry (MF) to assist meeting certain minimal needs of your ALS proposal. You are strongly encouraged to review the services and instrumentation available at MF BEFORE completing and submitting this request for their services.

### Please Note:

In considering this request, MF management has asked the Advanced Light Source User Office to make you aware of the following requirements related to granting Molecular Foundry work access:

1. This is a request for utilization of one or more specific laboratories and staff scientist support at the Molecular Foundry.
2. The Molecular Foundry will consider your request via the ALS for the attributes of administrative, scientific and technical feasibility; we will provide feedback in all three areas to ALS management in a timely fashion.
3. There are specific training requirements at the Molecular Foundry that are likely different and more restrictive than those in place at the ALS. Each person awarded Molecular Foundry use as part of their accepted ALS proposal will be expected to meet all Molecular Foundry JHA (Job Hazard Analysis) training requirements PRIOR TO commencement of any work at the Foundry.
4. There are seven individual labs at MF - each lab has unique equipment, instruments, staff, core competencies and workloads, all of which will be considered in evaluating your request for access.
5. Each MF lab has its own maximum amount of time that you can request for your project. In general, this access time is very rarely granted all in one block of time. Typically, granted time is spread out over a negotiated schedule throughout the proposal lifetime. Currently, the times shown below are maximum available total access time limits for lab training, use, and support from one or more assigned staff scientists within a facility. These limits are applicable to each awarded ALS proposal requesting MF support, regardless of how many persons are included on the proposal:

Imaging and Manipulation: Up to 20 hours of instrument time (includes training where available);

Nanostructures Fabrication: Up to 20 hours of clean room access and instrument use (includes training);

Theory of Nanostructures: Up to 2 weeks of scheduled time (80 hours) with one or more staff scientists (excludes NERSC time that may have to be requested separately);

Inorganic Nanostructures: Up to 1 week (40 hours) of scheduled training and lab work time with staff scientists;

Biological Nanostructures: Up to 2 weeks (80 hours) of scheduled training and subsequent lab work time;

Organic Nanostructures: Up to 2 weeks (80 hours) of scheduled training and subsequent lab work time;

National Center for Electron Microscopy: Up to 20 hours of training and access.

In addition, the usage rules for each piece of equipment and instruments vary widely within TMF. For many instruments and equipment, training can be arranged by the staff scientist subject matter expert. However, for some instruments within specific labs, no training is available and granting experiment time on these instruments must be done by individual appointment. Be sure you know the rules and guidelines for the services you are requesting.

### Please provide the following information when submitting your request for MF use:

MF Lab Requesting Access		Requested Use (hours)
Imaging and Manipulation	<input type="checkbox"/>	<input type="text"/> (Maximum 20 hours)
Nanostructure Fabrication	<input type="checkbox"/>	<input type="text"/> (Maximum 20 hours)
Theory of Nanostructures	<input type="checkbox"/>	<input type="text"/> (Maximum 80 hours)
Inorganic Nanostructures	<input type="checkbox"/>	<input type="text"/> (Maximum 40 hours)
Biological Nanostructures	<input type="checkbox"/>	<input type="text"/> (Maximum 80 hours)
Organic Nanostructures	<input type="checkbox"/>	<input type="text"/> (Maximum 80 hours)
NCEM	<input type="checkbox"/>	<input type="text"/> (Maximum 20 hours)

When do you anticipate utilizing the requested MF services for the first time? \*  (mm/dd/yyyy)

When do you anticipate will be the last date you will need the requested MF services? \*  (mm/dd/yyyy)

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## Productivity of Previous ALS Beam Time

### Beamtime Allocation

The list below shows any **beam time allocated** for the last three years only from the information stored in the user office database.

For Principal Investigator: Proposal Coordinator

No Beamtime allocated for Approved Program & General Sciences proposals.

### Publications

The list below shows the **refereed journal articles** (last 3 years only) in our database that are currently associated with the Principal Investigator entered on the previous page. **Please place a check mark next to the publications that reflect your track record at the ALS.**

If you wish to add a more recent publication click on the link below to open a new window where you can enter a new publication. After your submission you can refresh this page to view and include this new publication. Only publications with results from work done at the ALS should be reported.

[Submit a new publication](#)

For Principal Investigator: Proposal Coordinator

There are no publications.

**Please add comments on the past productivity of your group at the ALS that you would like reviewers to take into account. (600 characters max including spaces)**

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**Description of work: 1-3 sentences describing the experimental task\***

## Optional Attachment

**To better describe your experiment, you may attach a diagram or NSLS proposal as a PDF file.**

no file selected

Current file attached:

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# Experiment Safety Sheet

## What will you bring to the ALS?

### Sample and Prep Materials

- ☒ **Nanoparticles**
- ☒ **Radioactive materials** (Regardless of the activity level, including all forms of Uranium and Thorium)
- ☒ **Biological, plant and soil materials** (includes any material of biological origin)
- ☒ **Sample materials and chemicals** (other than radioactive or biological materials)

### Equipment you will bring to the ALS

All experiment equipment brought to the ALS must comply with ALS and Berkeley Lab safety requirements before it will be allowed to operate at the ALS.

- ☒ **Sample heating**
- ☒ **Cryogenics, Cryostats**
- ☒ **Gases and Gas Systems**
- ☒ **Lasers and UV or visible light source** (only if you are bringing this with you)
- ☒ **Electrical Equipment** (anything with a plug)
- ☒ **High Pressure (Diamond Anvil Cells)**
- ☒ **Vacuum Chambers and apparatus**
- ☒ **Electromagnetic field generating equipment (Magnetic/RF/ionizing radiation sources)**

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## Access to Resources

**Chemistry Lab access?** ☐ (Click for yes)

Any work with chemicals, other than very simple procedures with non-hazardous materials MUST be done in the Chemistry lab. See [Chemistry Lab Access](#) for more info.

**Biology Lab access?** ☐ (Click for yes)

Any work with biological materials, other than very simple procedures with non-hazardous materials, must be done in the Biology Lab.

**NCXT Lab access?** ☐ (Click for yes)

Any work in collaboration with the NCXT biological laboratory must be prearranged with BL 2.1 staff.

[Comments or suggestions about this page](#)



# Experiment Safety Sheet

## Sample materials and chemicals

Only small quantities of hazardous substances are allowed on the ALS experiment floor and all hazardous materials must be in approved containers. In addition, only limited storage space for hazardous materials is available; please bring the smallest quantity possible.

Shipping hazardous materials to the ALS must follow Berkeley Lab regulations (see PUB 3000 below). Shipment and transfer of hazardous materials is by approved carriers only. Transportation of hazardous materials by personal or Lab vehicle is prohibited.

List all materials planned for use in this experiment. Include samples (targets) and chemical solvents.

	Material	State	Amount	Units	Delete
1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
3	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
5	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>

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# Experiment Safety Sheet

## Lasers and UV or visible light source

LBNL laser safety training and eye examinations will be required for personnel using class 3b and class 4 lasers (documentation must be provided). If you have had a laser eye exam in the past year, it may satisfy LBNL medical surveillance requirements; use the Non-LBNL Eye Exam Form, available in the User Services Office, for evaluation of your exam.

Special safety requirements, depending on the class of the laser and whether the radiation is visible or invisible, are described in Chapter 16 of Pub-3000 (see below).

## Essential Information

[How do I work with lasers at the ALS](#)

List laser(s) to be used in this experiment.

### Laser 1

Type\*

Power\*

Pulsed/CW

Class\*

Brand/Model

### Laser 2

Type

Power

Pulsed/CW

Class

Brand/Model

### Laser 3

Type

Power

Pulsed/CW

Class

Brand/Model

### Laser 4

Type	<input type="text"/>
Power	<input type="text"/>
Pulsed/CW	<input type="text"/>
Class	<input type="text"/>
Brand/Model	<input type="text"/>
Laser 5	
Type	<input type="text"/>
Power	<input type="text"/>
Pulsed/CW	<input type="text"/>
Class	<input type="text"/>
Brand/Model	<input type="text"/>

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## Electrical Equipment (anything with a plug)

List power supplies and electrical equipment used in this experiment.

	Type/Manufacturer/Model	Max Voltage	Max Current	UL Listed *		
1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Unsure
2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Unsure
3	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Unsure
4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Unsure
5	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Unsure

**\*Underwriter's Laboratory or other Nationally Recognized Testing Laboratory**

**You may attach a pdf file which contains any text, drawings or photos of your electrical equipment.**

no file selected

**Current file attached:**

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# Experiment Safety Sheet

## Vacuum Chambers and Apparatus

The integrity of experiment endstations brought to the ALS is a concern because their vacuum chambers usually communicate directly with the ALS storage ring. Endstations must operate under UHV conditions or be isolated from the beamline to avoid contamination of the beamline and/or storage ring. If your vacuum chamber is isolated from the beamline vacuum by a thin window, be sure to check 'yes' in the box below. Commercially designed and fabricated stainless steel vacuum chambers are generally acceptable for use at the ALS. A Residual Gas Analysis (RGA) test of user equipment to assess vacuum quality is generally required before opening the chamber to a beamline.

The use of oil-sealed and oil-lubricated vacuum pumps at the ALS is highly discouraged due to the risk of contamination.

In some cases, however the need for very high pumping speed and/or resistance to corrosive gases may dictate the use of an oil-sealed pump. In these cases, a rigorous safety interlock system must be in place to prevent oil contamination of the beamline and storage ring. For more information, see ALS User Advisory 14 (see below).

Breakage of glass vacuum viewports is a significant hazard. Commercial viewports with apertures of 15 cm (6 in.) or less are acceptable, and may be provided with transparent protective covers by the ALS. Larger, or custom-made viewports must be documented and pressure tested.

Note:

- Only unbreakable "nude" ion gauge heads are allowed at the ALS. Glass-tube ion gauges are not allowed.
- Gas-delivery systems must include a positive means to prevent inadvertent over-pressurization of the vacuum chamber.
- Cooling water to vacuum joints is not allowed.

## Essential Information

[ALS User Advisory 9: Vacuum Policy for User Endstations for Protection of Beamline Components](#)

[ALS User Advisory 14: Interlock Requirements for Turbo Pump Systems on ALS Endstations](#)

## Additional References

[Advanced Light Source Vacuum Policy and Vacuum Guidelines for Beamlines and Experiment Endstations](#)

List all vacuum chambers and approximate volumes, and answer the following questions.

Chamber 1

Chamber\*

Approximate Volume\*

Fabrication Source\*

Working Vacuum  
Pressure\*

Does this chamber  
incorporate a thin  
window to isolate its  
vacuum from the  
upstream beamline  
vacuum?(Click for yes)

☐

Chamber 2

Chamber

Approximate Volume

Fabrication Source

Working Vacuum  
Pressure

Does this chamber  
incorporate a thin  
window to isolate its  
vacuum from the  
upstream beamline  
vacuum?(Click for yes)

Chamber 3

Chamber

Approximate Volume

Fabrication Source

Working Vacuum  
Pressure

Does this chamber  
incorporate a thin  
window to isolate its  
vacuum from the  
upstream beamline  
vacuum?(Click for yes)

Chamber 4

Chamber

Approximate Volume

Fabrication Source

Working Vacuum  
Pressure

Does this chamber  
incorporate a thin  
window to isolate its  
vacuum from the  
upstream beamline  
vacuum?(Click for yes)

Chamber 5

Chamber

Approximate Volume

Fabrication Source

Working Vacuum  
Pressure

Does this chamber  
incorporate a thin  
window to isolate its  
vacuum from the  
upstream beamline  
vacuum?(Click for yes)

Are there any viewports which are not standard catalog items of aperture 15 cm or less?(Click for yes)

Will any part of the system experience pressures greater than 3 psi above atmosphere?(Click for yes)

Will any oil-sealed or oil-lubricated vacuum pumps be used?(Click for yes)

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# Experiment Safety Sheet

## Gases and Gas Systems

Gases at low pressures are used in ALS endstations for a variety of purposes, and are usually segregated from the beamline by a thin window or a differential pumping section. Contamination of the beamline and storage ring is a concern, as well as inadvertent pressurization of the experiment chamber and its viewports.

## Essential Information

[ALS User Advisory 9: Vacuum Policy for User Endstations for Protection of Beamline Components](#)

[ALS User Advisory 15: The Use of Toxic and Corrosive Gases at ALS Endstations](#)

## Additional References

[Pub 3000, Chapter: 13 Gases](#)

[LBNL Activity Hazard Document: Use of Health Hazard Gases on the ALS Experiment Floor](#)

List the specifications of the gas systems.

Gases to be used and their intended maximum pressures\*

Thin window material, aperture, and thickness

Pressure-limiting provisions, such as a relief valve, limited source volume, or interlock system\*

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# Experiment Safety Sheet

## Radioactive Materials

The use of radioactive materials may require special procedures, training, handling and storage facilities.

## Essential Information

[ALS User Advisory 16: The Use of Radioactive Materials at the ALS Pub 3000, Chapter 21: Radiation Safety](#)

**Note: A Radiological Work Authorization (RWA) or Low Activity Source (LAS) may be required.**

**List all radioactive materials to be used in this experiment.**

### Material 1\*

Radioactive Isotopes

Amount on Expt Floor: State

Amount on Expt Floor: mg.

Curies

### Material 2

Radioactive Isotopes

Amount on Expt Floor: State

Amount on Expt Floor: mg.

Curies

### Material 3

Radioactive Isotopes

Amount on Expt Floor: State

Amount on Expt Floor: mg.

Curies

### Material 4

Radioactive Isotopes

Amount on Expt Floor: State

Amount on Expt Floor: mg.

Curies

### Material 5

Radioactive Isotopes



Amount on Expt Floor: State	<input type="text"/>
Amount on Expt Floor: mg.	<input type="text"/>
Curies	<input type="text"/>
Material 6	
Radioactive Isotopes	<input type="text"/>
Amount on Expt Floor: State	<input type="text"/>
Amount on Expt Floor: mg.	<input type="text"/>
Curies	<input type="text"/>
Material 7	
Radioactive Isotopes	<input type="text"/>
Amount on Expt Floor: State	<input type="text"/>
Amount on Expt Floor: mg.	<input type="text"/>
Curies	<input type="text"/>
Material 8	
Radioactive Isotopes	<input type="text"/>
Amount on Expt Floor: State	<input type="text"/>
Amount on Expt Floor: mg.	<input type="text"/>
Curies	<input type="text"/>
Material 9	
Radioactive Isotopes	<input type="text"/>
Amount on Expt Floor: State	<input type="text"/>
Amount on Expt Floor: mg.	<input type="text"/>
Curies	<input type="text"/>
Material 10	
Radioactive Isotopes	<input type="text"/>
Amount on Expt Floor: State	<input type="text"/>
Amount on Expt Floor: mg.	<input type="text"/>
Curies	<input type="text"/>

1. What is the isotope and the level of the daughter radiations? \*

--

**2. List any impurities present?**

**3. How is the sample prepared before mounting?**

**4. How is the sample mounted?**

**5. How has the sample been tested and certified for integrity and radiation levels?**

**6. How is the sample prepared in vacuum (e.g. sputtering, annealing, cleaving)?**

**7. In what possible ways could any of the sample material be lost?**

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## Biological Materials

For background information on how ALS manages biological samples and plant/soil samples, you may consult the following FAQ pages:

[How do I work with Biological Materials?](#)

[How do I work with plant and soil materials?](#)

Any work with biological materials, other than very simple procedures with non-hazardous materials, must be done in the Biology Lab.

Do you need access to the ALS (Bldg 15 - Rm 120) Biology Lab? ☐ (Click for yes)

Do you have an LBNL WPC Activity? ☐ (Click for yes)

If so, what is the Activity Manager?

List all Biological Samples you will bring to the ALS

	Sample Name *	Sample Origin *	Sample Species/Strain *		Check to Delete
1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="button" value="Enter Bio Sample Details 1"/>	<input type="checkbox"/>
2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="button" value="Enter Bio Sample Details 2"/>	<input type="checkbox"/>
3	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="button" value="Enter Bio Sample Details 3"/>	<input type="checkbox"/>
4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="button" value="Enter Bio Sample Details 4"/>	<input type="checkbox"/>
5	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="button" value="Enter Bio Sample Details 5"/>	<input type="checkbox"/>
<input type="button" value="Add More Biological Samples"/>		<input type="button" value="Delete Checked Biological Samples"/>			

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# Experiment Safety Sheet

## Sample Heating

**Describe the equipment you will bring to the ALS**

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## High Pressure (Diamond Anvil Cells)

**Describe the equipment you will bring to the ALS**

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## Nanomaterials

### Check all that apply

- ☐ Naturally occurring nanomaterials
- ☐ Engineered nanomaterials
- ☐ Unbound nanomaterials
- ☐ Bound to a substrate
- ☐ In liquid
- ☐ Loose powder

### Sample Description - Describe each sample you will bring

### Describe your sample preparation (include location of prep and what you will do with your samples at the end of your ALS Beamtime)

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## Cryogenics, Cryostats

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# Experiment Safety Sheet

## Electromagnetic field generating equipment

### High Magnetic Field Survey

### RF Surveys

### Radiation Hazards

The use of radiation-producing equipment (x-ray generators, some high-voltage power supplies, etc.) may require special procedures and training.

### Essential Information

[Pub 3000, Chapter 21: Radiation Safety](#)

Does the Photon beam pass through an x-ray transmissive window at any time?(Click for yes)



Other equipment capable of producing x-rays?(Click for yes)



Are there any 0 deg glass viewports less than 1/79mm?(Click for yes)



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# Experiment Safety Sheet

## Submission Agreement

**As Experimenter in Charge I certify that:**

- 1. I am responsible for the safe conduct of this proposed experiment.**
- 2. All hazard information provided above is correct and that I will provide the ALS updates to this information whenever there are changes.**
- 3. I will ensure that all experimental team members will become familiar with and follow the ALS safety requirements.**
- 4. I will inform the ALS of all experimental team members and will designate a backup for myself if I do not participate directly.**
- 5. I and all experimental team members will complete all necessary safety training.**

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**I agree. Submit completed form.**

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